

## **MicroNews**

# Fall 2000 Newsletter of the Microbeam Analysis Society

http://www.microanalysis.org/

## PRESIDENT'S MESSAGE

It will be a pleasure for me to serve as your MAS President over the course of the next year. I am deeply indebted to our outgoing President, Charles Lyman, for the extraordinary service that he has provided to the society, including his critical role as the current Editor-in-Chief of Microscopy and Microanalysis. Thanks, Charlie! I also want to acknowledge all of the volunteer efforts by members of the MAS Executive Council and other appointed MAS representatives who are addressing important matters such as relationships with corporate sustaining members, interactions with local affiliated and international microanalysis societies, membership services, finances, tour speakers programs, publications, scientific conferences, communications, and planning. I encourage you as society members, to look inside this newsletter to examine the lists of our current representatives, and to contact them about any issues of concern regarding the activities and future directions of the society.

It is again election time for MAS! The nominating committee presented the following slate of nominees for MAS Council at the annual business meeting in Philadelphia: Greg Meeker for President; Harvey Freeman for Treasurer; and Harald Ade, John Bruley, Ernie Hall, and Stacie Kirsch for Director. This is an exceptionally strong slate of candidates, both in terms of their past involvement in MAS, as well as their scientific contributions or leadership in microanalysis activities at the national level. This issue of MicroNews includes the brief biographies of the candidates for your convenience. Ballots are mailed with the membership renewal notices - so make sure to vote when you renew your membership this Fall.

This past summer was an exceptionally busy one for the MAS membership, including our extensive participation in the excellent meeting of the International Union of Microanalysis Societies (IUMAS) held in Hawaii, and the annual Microscopy and Microanalysis (M&M) meeting in Philadelphia. We continue to witness exciting developments in areas such as x-ray detection systems, low voltage x-ray microanalysis, quantification and spectral imaging, and an ever-widening range of microanalysis techniques and

corresponding fields of application. The M&M meeting remains a successful and stimulating cooperative venture with the Microscopy Society of America (MSA). I look forward to supporting the continuation and evolution of that annual effort.

Next year's M&M meeting will be held from August 5-9 in Long Beach, CA. There is a wealth of planned sessions related to advances in instrumentation and techniques, e.g. frontiers in x-ray spectrometry, EELS microanalysis, microanalysis possibilities for scanning probe instruments, digital imaging, instrument automation, confocal and fluorescence microscopies. A special joint symposium is planned on, "Microscopy and Microanalysis in the Real World" that will highlight important applications areas. Inga Musselman, an outgoing member of the MAS Council, is doing an excellent job as the MAS Program Co-Chair for the M&M 2001 meeting. We look forward to your scholarly contributions and attendance and what promises to be an important conference.

I also encourage your thoughts regarding MAS-supported topical conferences that would serve to complement the national M&M meetings and local scientific meetings organized by our local affiliated societies. Please contact Valarie Woodward, our Topical Conferences Liaison, with your suggestions. A topical meeting planned for next year is the NIST-MAS Topical Conference on *Understanding the Accuracy Barrier in Quantitative EPMA and the Role of Standards* being organized by Dale Newbury and Ryna Marinenko. It is scheduled for October 15-18, 2001, so mark your calendars!

The scope and quality of our journal, Microscopy and Microanalysis, continues to be enhanced. ISI recently rated it the #4 most-cited journal in microscopy for 1999, and MSA has made a long-term commitment to supporting the journal. You can look forward to special issues, such as "Fifty Years of EPMA" to be published in 2001, as well as "mini-reviews" and expanded color and text pages. The journal is available at only \$15 per year with your \$25 annual MAS dues for a regular membership, so remember to signup for a subscription. Contributed manuscripts addressing advances in instrumentation, techniques, and analytical applications are always welcome!

The financial status of our society remains healthy

\_

and membership levels are stable. Our long-time treasurer, Harvey Freeman, deserves a special thanks for his continuing efforts to manage the resources of our society with an appropriate balance of programmatic support and fiscal restraint.

To obtain the latest information about MAS, please consult our Web site maintained by John Mansfield at <a href="http://www.microanalysis.org/">http://www.microanalysis.org/</a>. If you have any questions or ideas regarding MAS, feel free to contact me directly at <rli>rlinton@oregon.uoregon.edu>. Thanks for your continuing support!

Rich Linton MAS President

## **EDITOR'S NOTE**

In this issue of MicroNews you will find the list of candidates running for President Elect, Treasurer, and Directors of MAS don't forget to vote. There is also an article about the program for the upcoming M&M 2001 meeting that will be held in Long Beach, CA in August. And if you want to buy a copy of the IUMAS 2000 proceedings, just look a little further.

My frequent plea in this column is for the Affiliated Regional Societies to keep me and Paul Hlava informed about changes in contact persons, their addresses, and telephone numbers. Also, if you have meetings planned for the future, just email me with the day, time, location, and contact person. Other details are not necessary in order to include it in the list of upcoming meetings.

Please don't hesitate to contact me with comments, suggestions, or possible contributions.

Ryna Marinenko MicroNews Editor

## **MEMBERSHIP SERVICES**

The MAS booth at the M&M2000 meeting in Philadelphia was very active. The 2000 Membership directories were available along with the Proceedings from the IUMAS meeting held in Kona. As always the MAS Social was well attended, allowing our members to rekindle old friendships and to get acquainted with new members.

The MAS 2000 directories, along with your membership renewal form for 2001, will be mailed during the first week of December. We hope you find the directory to be a valuable reference. Inside you will find listings of our Executive Council, additional representatives, affiliated regional societies, our sustaining members, and an alphabetical and geographical roster of our members. Also included is the history of the Microbeam Analysis

Society, past officers and awadees, and the MAS Bylaws.

Currently our membership stands at 539. My goal for 2001 is to increase this by 10%. Please submit your renewal application at your earliest convenience and if you know former members who have let their membership lapse, urge them to rejoin. With this in mind I would like to point out one of the greatest benefits of membership to MAS, that is the M&M journal. What a bargain at only \$15 per year! Other benefits include the wealth of information in the directory, discounted registration to the M&M meetings, and a subscription to MicroNews.

Please don't hesitate to contact me so I can better serve you and the society.

Lou Ross Membership Services.

## MAS TOUR SPEAKER PROGRAM

The three speakers, their affiliations, and titles for this year's MAS Tour Speaker Program are

Jim Bentley of Oak Ridge National Laboratory

Energy-filtered Transmission Electron Microscopy
of Materials,

Valerie Woodward, B. F. Goodrich

What the Heck Happened to This, Real Life Failure Analysis Using Microscopy and Microanalysis (Fiori Speaker), and

Paul Hlava, Sandia National Laboratories

Causes of Color in Minerals and Gemstones.

Full details can be gleaned from the website - <a href="http://www.microanalysis.org/mas/masts/masts.html">http://www.microanalysis.org/mas/masts/masts.html</a>. By the time this reaches you, 5 talks will have occurred and two more are scheduled. They are:

Speaker	Date
Hlava	Oct. 19, 2000
Hlava	Nov. 15, 2000
Bentley	Oct. 19, 2000
Bentley	Oct. 20, 2000
Anderson	Oct. 13-15, 2000
Hlava	Dec. 1, 2000
Bentley	May 23-25, 2001
	Hlava Hlava Bentley Bentley Anderson Hlava

I encourage all of our affiliated societies to give a thought to securing one of these speakers for your next meeting.

I would like every affiliated society to check their listing on the contact page -

<a href="http://www.microanalysis.org/mas/masas/masas.html">http://www.microanalysis.org/mas/masas/masas.html</a><a href="http://www.microanalysis.org/mas/masas/masas.html">http://www.microanalysis.org/mas/masas/masas.html</a><a href="http://www.microanalysis.org/mas/masas/masas.html">http://www.microanalysis.org/mas/masas/masas.html</a><a href="http://www.microanalysis.org/mas/masas/masas.html">http://www.microanalysis.org/mas/masas.html</a><a href="http://www.microanalysis.org/mas/masas/masas.html">http://www.microanalysis.org/mas/masas.html</a><a href="http://www.microanalysis.org/mas/masas.html">http://www.microanalysis.org/mas/masas.html</a><a href="http://www.microanalysis.org/mas/masas.html">http://www.microanalysis.org/mas/masas.html</a><a href="http://www.microanalysis.org/masas.html">http://www.microanalysis.org/masas.html</a><a href="http://www.microanalysis.org/masas.html">http://www.microanalysis.org/masas.html</a><a href="http://www.microanalysis.org/masas.html">http://www.microanalysis.org/masas.html</a><a href="http://www.microanalysis.org/masas.html">http://www.microanalysis.org/masas.html</a><a href="http://www.microanalysis.org/masas.html">http://www.microanalysis.org/masas.html</a><a href="http://www.microanalysis.org/masas.html">http://www.microanalysis.org/masas.html</a><a href="http://www.microanalysis.org/masas.html">http://www.microanalysis.org/masas.html</a><a href="http://www.microanalysis.org/masas.html">http://www.microanalysis.org/masas.html</a><a href="http://www.microanalysis.org/masas.html">http://www.microanalysis.org/masas.html</a><a href="http://www.microanalysis.org/masas.html">http://www.microanalysis.org/masas.html</a></a><a href="http://www.microanalysis.org/masas.html">http://www.microanalysis.org/masas.html</a>

Paul Hlava

Director of the Affiliated Regional Societies

## **IUMAS 2000 PROCEEDINGS**

## EVEN IF YOU MISSED IUMAS 2000 IN HAWAII DON'T MISS THE PROCEEDINGS

of the Second Conference of the International Union of Microbeam Analysis Societies held in Kailua-Kona, Hawaii July 9-14, 2000 245 papers, 498 pages

Published in hard bound edition by the Institute of

Physics, Philadelphia \$30 plus \$5 postage (U.S) \$30 plus \$11 postage (Foreign) Please call or e-mail: Sharon Coe

610-758-5133 sharon.coe@lehigh.edu

Payment by Visa, MasterCard, or American Express

Sharon L. Coe

Conference Coordinator

Department of Materials Science and Engineering

Lehigh University 5 East Packer Avenue Bethlehem, PA 18015 Phone: 610/758-5133

Fax: 610/758-4244 e-mail: slc6@lehigh.edu

 $http://www.lehigh.edu/{\sim}inmatsci/Microscourses.html$ 

## MEETINGS AND SHORT COURSES

#### **Meetings**

8th Intl Conf on Frontiers of Electron Microscopy in Materials Science Nov. 13-17, 2000, Matsue, Japan Contact: www.femms2000.11nl.gov

**American Society for Cell Biology**, 40th Ann. Mtg., Dec. 9-13, 2000,

San Francisco, CA

Contact: email: ascbinfo@ascb.org, web: www.ascb.org/

ascb

**Biophysical Society Meeting**, Feb. 17-21, 2001, Boston, MA

Contact: email: society@biophysics.faseb.org

**PITTCON 2001**, Mar. 4-9, 2000, New Orleans, LA, USA Contact: Pittsburgh Conference: Fax: (412)825-322, web: http://www.pittcon.org

**Surface Analysis 2001**, Mar., 12-17, 2001, Orlando, FL,

Contact: Fred Stevie, Lucent Technologies (Cirent Semiconductor), 9333 S. John Young Parkway, Orlando, FL 32819, USA. Fax: (407)371 6999, email: <a href="mailto:stevie@lucent.com">stevie@lucent.com</a>

## EMAS 2001 - 7th European Workshop on Modern Developments and Applications in Microbeam

**Analysis**, May 6-10, 2001, Tampere, Finland Contact: Luc Van't dack, Secretary, Univ Antwerp: Fax: +32 3 820 23 76, email: vantdack@uia.ua.ac.be or web site: http://www.emas.ac.uk

Scanning 2001, May 5-7,2001, The Roosevelt Hotel, New York, New York, USA

Contact: Paula Pivnick, Scanning 2001, PO Box 832, Mahwah, NJ 07430-0832, (201)818-1010, FAX: (201)818-0086, email: <a href="mailto:scanning@fams.org">scanning@fams.org</a>, web: http://www.scanning.org

SCANDEM 2001 Microscopy Conference and Exhibition, June 12-15,2001, Stockholm, Sweden Contact: Biology: email: Hans.Hebert@csb.ki.se

Materials: Margareta Sundberg, email: <a href="marsu@inorg.su.se">marsu@inorg.su.se</a>, Exhibition: email: Philip.Koek@csb.ki.se

## ICXOM XVI: 16th Intl Conf on X-ray Optics and

**Microanalysis**, July 2-6, 2001, Vienna, Austria Contact: Sect: Fax: +43 1 58801 13799, email: <a href="mailto:icxom@icxom.at">icxom@icxom.at</a>, web: htttp://www.icxom.at

# **2nd Intl Conference on Scanning Probe Microscopy of Polymers**, July 21-25, 20001, Weingarten, Germany Contact: Klaus Weishaupt, Fax: +49 0 700 94832 329,

email: klaus.weishaupt@witec.de, web: http://

www.witec.de/spm2001

## MICROSCOPY & MICROANALYSIS 2001, Aug. 5-

9, 2001, Long Beach, CA

Contact: Mary Rebedeau, Chicago: Fax (708)361-6166, email: MSA@tradeshownet.com, web: msa.microscopy.com

4th International Conference on Noncontact Atomic ForceMicroscopy(NC-AFM2001), Sept. 2-5, 2001,

Kyoto, Japan

Contact: Y. Sugawara: Fax: +81-6-6879-7764, email:

<u>sugawara@ele.eng.osaka-u.ac.jp</u>, web: http://www-e2.ele.eng.osaka-u.ac.jp/NC- AFM2001

## 5th Multinational Congress on Electron Microscopy,

Sept. 20-25, 2001, Lecce Italy

Contact: Dr Massimo Catalano: mcem5@ime.le.cnr.it www.mcem5.unile.it

## ${\bf MICROSCOPY~\&~MICROANALYSIS~2002},~{\bf Aug.~4-}$

8, 2002Quebec City, Quebec, Canada

Contact: Mary Rebedeau, Chicago: Fax (708)361-6166,

email: MSA@tradeshownet.com, web:

msa.microscopy.com

## ICEM 2002 - 15th International Congress on Electron

**Microscopy**, Sept. 1-6, 2002, Durban, South Africa Contact: Robin Cross, Fax +27 46 622 4377, email: eurc@giraffe.ru.ac.za, Internet: www.ru.ac.za/affiliates/ emu/icem2002.htm

## MICROSCOPY & MICROANALYSIS 2003, Aug. 3-7,

2003, San Antonio, TX

Contact: Mary Rebedeau, Chicago: Fax (708)361-6166,

email: MSA@tradeshownet.com, web:

msa.microscopy.com

## MICROSCOPY & MICROANALYSIS 2004, Aug. 1-5,

2004, Savannah, GA

Contact: Mary Rebedeau, Chicago: Fax (708)361-6166,

email: MSA@tradeshownet.com, web:

msa.microscopy.com

#### **Short Courses**

## **Short Course on Time-Resolved Fluorescence**

Spectroscopy, Mar. 19-23, 20001, Baltimore, MD, USA

Contact: Mary Rosenfeld: Fax: (410)706-8408, or email: <a href="mailto:cfs@cfs.umbi.umd.edu">cfs@cfs.umbi.umd.edu</a>, or web: <a href="http://www.cfs.umbi.umd.edu">http://www.cfs.umbi.umd.edu</a>

## Lehigh Microscopy School Course, June 11-22, 2001,

Bethlehem, PA, USA:

SEM and X-ray Microanalysis (11-15)

Intro to SEM and EDS (10)

Advanced SEM (18-22)

Quantitative X-ray Microanalysis (18-22)

Analytical TEM (18-21)

TEM Specimen Preparation(19-21)

Atomic Force Microscopy (19-22)

Contact: Sharon Coe, FAX (610)758-4244, web: http://www.lehigh.edu/microscopy

## **Affiliated Societies Meetings**

**AIMS,** Thurs., Ann. Mtg., Feb. 22, 2001, Tangue Verde Ranch, Tuscon, AZ

Contact: David Bentley or Alice Stone; email: dlb@u.arizona.edu, alstone@u.arizona.edu

**AREMS,** visit web site for information www.wise.virginia.edu/cvc/arems.arems.html

MMMS, visit web site for information: <a href="http://www.msa.microscopy.com/MSALAS/MMMS/MMMSHomePage.html">http://www.msa.microscopy.com/MSALAS/MMMS/MMMSHomePage.html</a>

MSNO, visit web site for information www.msneo.org

## **NCSEMMA**

Contact: Peter Ingram or Ann LeFurgey; email: p.ingram@cellbio.duke.edu or a.lefurgey@cellbio.duke.edu http://152.3.167.174/NCAnnSymp2000.html

**SEMS**, visit web site for information http://www.biotech.ufl.edu/sems/

## MICROSCOPY & MICROANALYSIS 2000

Bob Price, MSA Program Chair Edgar Voelkl, MSA Program Vice-Chair Inga Musselman, MAS Program Co-Chair Bob Koch, Local Arrangements Chair

The abstract deadline is February 15, 2001.

## **PROGRAM**

Microscopy and Microanalysis 2001 will be held August 4-9 in Long Beach, CA. The meeting will provide comprehensive Symposia, Tutorials and Special Sessions covering all aspects of microscopy and microanalysis. The Program will begin on Saturday, August 4th, with a two-day Pre-meeting Congress, chaired by Dr. Dave Piston of Vanderbilt University, entitled "Imaging Life: From Cells to Whole Animals". On Sunday, August 5th, Workshops will be available in Practical Digital Imaging, Image Processing and Analysis, Low-Voltage and Low Vacuum SEM, Failure Analysis Case Studies, and Materials Ultramicrotomy. Formal meeting sessions will begin on Monday, August 6th, and will consist of a blend of different presentation formats including Symposia, Tutorials and Poster Sessions. The integration of the program with the commercial exhibits will provide the unique opportunity for "hands-on" learning with stateof-the-art instrumentation.

4

The scientific program will include the Presidential Happenings and Symposia concerning Physical Sciences, Biological Sciences, and Advances in Instrumentation and Techniques. Joint Symposia in these areas will also be highlighted. In addition, a Corporate Session will be held in which corporate members and exhibitors will present information concerning recent developments in instrumentation and technique application. The Physical Sciences Symposia will include:

- Atom Location by Channeling Enhancement of X-Ray and EELs Signals,
- Quantitative X-Ray Microanalysis in the Microprobe, in the SEM and in the ESEM: Theory and Practice,
- 3. Quantitative Measurements in the Scanning Transmission Electron Microscope,
- Quantitative Transmission Electron Microscopy of Interfaces,
- 5. Characterization of Catalysts,
- Novel Microscopy Assisted Ceramic Developments in Materials Science and Nanotechnology, and
- Industrial Applications of Optical Spectroscopy in Microanalysis.

The Biological Sciences Symposia will include:

- Video and Digital Imaging Microscopy: A Symposium Honoring Dr Shinya Inoué,
- 2. Bridging the Gap Between Structural and Molecular Biology, The Cell Biology of Cancer,
- 3. Apoptosis in Health and Disease: Techniques for Detection and Biological Importance,
- Emerging Pathogens: Something Old, Something New, Microscopy, Microanalysis and Image Analysis in the Pharmaceutical Industry,
- 5. Advances in Imaging Techniques for Biomaterials, and
- 6. Applications and Advances in Vascular Corrosion Casting in Microvascular Research.

The Joint Symposia will address

- 1. Microscopy and Microanalysis in the Real World,
- 2. Biological and Materials Science Experiments Conducted in Real (Space), and
- Simulated (Bioreactors) Microgravity, and Teaching Microscopy.

Symposia in Advances in Instrumentation and Techniques will include:

- 1. Digital Imaging and Adobe Photoshop,
- 2. TEM Instrument Developments,
- 3. Instrument Automation,
- 4. Applications and Developments of Focused Ion Beam (FIB) Instruments,
- EELS Microanalysis at High Sensitivity: Advances in Spectrum-Imaging,
- 6. Energy Filtering and Detection,
- 7. Frontiers of X-Ray Spectrometry (EDS and WDS) in Microanalysis,
- 8. Can Scanning Probe Microscopes Do Microanalysis,
- 9. Challenges of Confocal Microscopy in the 21st Century,
- 10. Correlative Fluorescent Microscopy and Flow Cytometry Techniques,

- 11. Recent Techniques for the Fixation and Staining of Biological Samples,
- Cryoimmobilization, Freeze Substitution and CryoEM Labeling for Microscopy and Correlative Microscopy, and
- Electron Tomography. Recent Advances and Applications.

The Technologist's Forum will provide symposia in

- 1. Remote Microscopy in Shared and Teaching Facilities,
- 2. Dual Beam Instrumentation, and the
- 3. Computer Workshop and Software Exchange.

In addition, symposia will address:

- 1. Problem Solving with the Experts,
- 2. Issues in Digital Imaging for the Microscopist,
- 3. Core Facility Management,
- 4. Optimizing the Environment for High Performance Electron Microscopy, and
- Project MICRO.

Tutorials will also be offered in the following topical areas:

- 1. Extracting Information from Three-Dimensional Structures: Selected Techniques in Biological Cellular and Macromolecular Microscopy,
- 2. 3D Visualization Tools,
- Seeing the Forest for the Trees: Selective Staining and Contrast Enhancement Methods for Biological Electron Tomography Applications,
- 4. Building and Simulating High-resolution 3D Subcellular Models,
- 5. Electron Diffraction (TEM),
- 6. Low Voltage SEM Imaging and Microanalysis,
- 7. Running a Multi-purpose Microscopy Laboratory,
- 8. Things That Go 'Bump' in the VPSEM, and
- 9. How We Image with Them, and Adobe Photoshop 101.

Submitted by

Inga Musselman

(See page 8 for the M&M2000 Social Events)

-

_	

## **M&M 2000 SOCIAL EVENTS**

## SOCIAL EVENTS

## **Sunday Evening Reception**

Dining and entertainment has been planned on the legendary Queen Mary. Steeped in history and tradition, the Queen Mary is the grandest ocean liner ever built. During her illustrious career, she has played many roles—from elegant ocean liner to World War II troopship. Bus transportation will be provided between the Queen Mary and the Convention Center.

#### Wednesday Evening Social

The venue for the Wednesday Evening Social will be the motor yacht "Spirit" departing from Shoreline Village, Long Beach adjacent to the Convention Center. Live entertainment and a five-entry buffet will be provided during a leisurely cruise within the Long Beach and Los Angeles breakwater.

## **Annual Golf Tournament**

The Annual Golf Tournament will take place at the Meadowlark Golf Course in the heart of Huntington Beach.

## **Local Attractions**

Local attractions in the waterfront area include Queensway Bay, the Aquarium of the Pacific, Queen Mary exhibits, Pine Avenue restaurants, and golf.

## **Half-Day Trips**

Half-day trips to Los Angeles are recommended to tour Griffith Park – The Zoo/Observatory, the Getty Museum, the Los Angeles County Museum of Art (LACMA), or Hollywood.

## **Full-Day Trips**

Full-day trips outside the city are also possible including a cruise to Santa Catalina Island, and trips to Disneyland, Knott's Berry Farm, or Universal Studios. Half-day or full-day sport fishing trips are also available from the 22<sup>nd</sup> Street Landing area.

## **Post Meeting Opportunites**

Post meeting opportunities include extended scenic tours along the California Coast or a cruise to the Mexican Riviera.

Contributed by Inga Musselman

## TOPICAL CONFERENCES

The Microbeam Analysis Society is soliciting proposals from our affiliated regional societies for Regional Topical Conferences, to be held in the year 2001 and beyond. As Regional Topical Conference Liaison, I invite you to share this request with your board or council and your membership, and submit a proposal for consideration. MAS Council will review proposals at the Winter Council meeting to be held January 20, 2001. I request that the proposals be submitted to me, per the guidelines (which are available from me, contact information below), no later than December 20, 2000, so that I can review them for completeness prior to submission to the Council on January 20. Some financial and program assistance will be available from MAS for approved conferences.

If you have any questions or need guidance, do not hesitate to contact me at (216) 447-5408 or woodward@brk.bfg.com. The Council is enthusiastic about this program and we look forward to hearing from you.

Topical Conferences Liaison, Valerie Woodward

## **EXECUTIVE COUNCIL**

President

Richard W. Linton

Vice Provost for Res. and Dean of the Grad. Schl.

University of Oregon 207 Johnson Hall

Eugene, OR 97403-1258

Phone: (541) 346-5129 or (541) 346-3081

rlinton@oregon.uoregon.edu

Past President Charles Lyman

Lehigh University; Material Science Department

5 East Packer Avenue Bethlehem, PA 18015

(610)758-4249 FAX: (610)758-4244

Treasurer

Harvey A. Freeman

958 Long Pond Road Brewster, MA 02631-1898

(508)896-9060

hfreeman@capecod.net

Secretary Edgar Etz

NIST; Mail Stop 8371

Gaithersburg, MD 20899-8371

(301)975-3909 FAX: (301)417-1321

## **DIRECTORS**

Inga Holl Musselman (1998-2000)

Chemistry Program, BE 26 University of Texas at Dallas

P. O. Box 830688

Richardson, TX 75083-0688

(972)883-2706 FAX: (972)883-2925

imusselm@utdallas.edu

**Paul Carpenter** (1998-2000)

ES75 USRA NASA

Marshall Space Flight Center

Huntsville AL 35812

(256)544-6216 FAX (256)544-8762

Paul.Carpenter@iss.msfc.nasa.gov

Ian Anderson (1999-2001)

PO Box 53315

Knoxville, TN 37950-3315 Oak Ridge National Laboratory

(423)574-0632 FAX: (423)574-0641

1001

irl@ornl.gov

**Raynald Gauvin** (1999-2001)

Dept. of Mechanical Engineering

Faculty Applied Science

Universite de Sherbrooke

Sherbrooke, PQ J1K 2R1, CANADA (819)821-8000#2850, Fax: (819)821-7163

rgauvin@vulcain.gme.usherb.ca

Richard Leapman (2000-2002)

BEIP/NCRR

Bldg. 13, Rm. 3N17

NIH, Bethesda, MD 20892

(301) 496-2599, FAX: (301) 496-6608

leapman@helix.nih.gov

**Valerie P. Woodward** (2000-2002)

BFGoodrich Perf. Matls. Meas. Sci., D/2197

Microscopy and X-ray Analysis

9921 Brecksville Rd.

Brecksville OH 44141-3289

(216) 447-5408, FAX: (216) 447-5249

woodward@brk.bfg.com (e-mail)

## **HONORARY MEMBERS**

L. S. Birks (Deceased)

I. B. Borovskii (Deceased)

Raimond Castaing(Deceased)

Arthur A. Chodos

V. E. Cosslett (Deceased)

Peter Duncumb

Charles E. Fiori (Deceased)

Raymond Fitzgerald

Theodore Hall

K. F. J. Heinrich

James Hillier

Joseph I. Goldstein

L. L. Marton (Deceased)

Robert E. Ogilvie

Jean Philibert

Stephen J. B. Reed

Ryuichi Shimizu

Gunji Shinoda (Deceased)

Georges Slodzian

Oliver C. Wells

David B. Wittry

^

## ADDITIONAL REPRESENTATIVES

## Accountant, Dues and Mailing List William S. Thompson

c/o Microbeam Analysis Society P.O. Box 502; Fairport, NY 14450-0502 (716)586-4985; thompsow@eznet.net

## Affiliated Regional Societies Paul Hlava

Sandia National Laboratories Dept. 1822, MS-1405; Albequerque, NM 87185-1405 (505)844-1890 FAX: (505)844-2974 pfhlava@sandia.gov

## Awards Committee for MAS 2000 Inga Musselman (see directors) Paul Carpenter (see directors)

## **Computer Activities Committee John F. Mansfield**

(734)936-3352 FAX: (734)763-2282 jfmjfm@umich.edu **Paul Carpenter** (see directors) (256)544-6216 FAX (256)544-8762 Paul.Carpenter@iss.msfc.nasa.gov

## Conference Proceedings Inventory C. Susskind

San Francisco Press, Inc.; Box 6800 San Francisco, CA 94101-6800 (510)524-1000

## Corporate Liaison Committee Thomas G. Huber

JEOL (USA) Inc.; 11 Dearborn Road Peabody, MA 01960 (978)535-5900 FAX:(978)536-2205 http://www.jeol.com

## Finance Committee, Archivist & Historian Gordon Cleaver

Schafer Corp.
Energy & Environment Div.
Schafer Vallecitos Laboratory (SVL)
6705 Vallecitos Rd.
Sunol, CA 94586
(925)862-4320, FAX: (925)862-4516
gcleaver@schafercorp.com

## International Liaison David B. Williams

Department of Materials Science and Engineering 5 East Packer Avenue; Lehigh University Bethlehem, PA 18015-3195 (610)758-6120 FAX: (610)758-4244 dbw1@lehigh.edu

## **Long Range Planning Committee John A. Small**

NIST; Bldg 222, Rm. A113; Gaithersburg, MD 20899 (301)975-3900 FAX: (301)216-1134 john.small@nist.gov

# MAS-MSA Liaison, Nominations and President's Awards Charles Lyman(see President)

# Membership Services Lou Ross MAS Membership Services PMB141 2101 W. Broadway Columbia, MO 65203-1261

1(800)4MASMEM, FAX: (314)882-5458 masmembership@excite.com

## MicroNews Editor Ryna B. Marinenko NIST; Mail Stop 8371 Gaithersburg, MD 20899-8371 (301)975-3901 FAX (301)417-1321

ryna.marinenko@nist.gov

## Sustaining Membership Committee Cathy Johnson

Gates Rubber Company 990 So. Broadway; Denver, CO 80217 (303)744-4592 FAX (303)744-5808 cj8638@ gates.com

## Topical Conferences Liaison Valerie Woodward

9921 Brecksville Road Brecksville, OH 44141 BF Goodrich Research Center (216)447-5408 FAX (216)447-5249 woodward@brk.bfg.com

## AFFILIATED REGIONAL SOCIETIES

Format of the following list is:

Full Name (Acronym) (arranged alphabetically by full name)

Society URL

Contact (Position in that Society)

Address

Phone; FAX (only one number given indicates phone unless

otherwise noted)

Email

Appalachian Region Microscopy Society (AReMS)

http://www.wise.virginia.edu/cvc/arems/arems.html

Chuck Turnbill (President)

Alcatel Telecommunications Cable

2512 B Penny Road

P.O. Box 400

Claremont, NC 28610

(828)459.8516; (828)459.1031

chuck.turnbill@cable.alcatel.com

Arizona Imaging and Microanalysis Society (AIMS)

http://www.msa.microscopy.com/MSALAS/AIMS/

AIMSHOME.HTM

David Bentley (President)

P.O. Box 210036

Imaging Facility

Forbes, Room 304

University of Arizona

Tucson, AZ 85721-0036

(520) 621.5097; (520).621.5097

dlb@u.arizona.edu

Central States Microscopy and Microanalysis Society

(CSM&MS)

http://treefrog.cvm.uiuc.edu/csmms/

Dan Kremser (President)

Washington University

Earth and Planetary Sciences/Box 1169

One Brookings Drive

St. Louis, MO 63130-4899

(314).935.5605; (314).935.7361

dkremser@levee.wustl.edu

Colorado Microbeam Analysis Society (CoMAS)

 $http://microscopy.cvmbs.colostate.edu/msa/mssem\_cmas/$ 

Julie Pier (President)

Luzenac America

**Technical Center** 

8985 East Nichols Ave.

Englewood, CO 80112

(303)643.0457; (303)799.8926

julie.pier@america.luzenac.com

Instrumental Analysis Society (IAS)

Thomas R. Parayil

Allegheny Ludlum Corp.

**Technical Center** 

Alabama and Pacific Aves.

Brackenridge, PA 15014

(724)226.6290; (724)226.6452

TParayil@AlleghenyLudlum.com

Louisiana Society for Microscopy (LSM)

http://www.msa.microscopy.com/MSALAS/LSM/

LSMHomePage.html

Nick Norton, President

Dept of Biological Sciences/Box 335

Southeastern Louisiana Universtiy

Hammond, LA, 70402

(504)549.2173; (504)549.3851

nnorton@selu.edu

Metropolitan Microscopy Society (M2S)

Phillip L. Flaitz (Co-Chairman)

IBM Analytical Services Group

1580 Route 52 - Z/E40

Hopewell Junction, NY 12533

(914)892.3094; (914)892.2555

pflaitz@vnet.ibm.com

Michigan Microscopy & Microanalysis (MMM or M3)

Robert Eversole (President)

**Biological Imaging Center** 

5330 McCracken Hall

Western Michigan University

Kalamazoo, MI 48009

(616)387.5640

eversole@wmich.edu

Microbeam Analysis Society of Australia (AusMAS)

Clive Nockolds

Electron Microscope Unit

University of Sydney

Sydney, NSW, Australia

61.02.692.2351; 61.02.692.4671

clive@mail.emu.usyd.edu.au

Microscopy Society of Northeastern Ohio (MSNEO)

Valerie P. Woodward (Secretary)

The BFGoodrich Company

Research & Development Center

9921 Brecksville Road

Brecksville, OH 44141

(216)447-5408; (216)447-5575

woodward@brk.bfg.com

Microscopy Society of the Ohio River Valley (MSORV)

William R. Ragland (President)

Chief Composite Technician

University of Dayton Research Institute

300 College Park Drive

Dayton OH 45469-0168

(937)255-1142; (937)258-8075

Email: william.ragland@wpafb.af.mil

Mid-Atlantic Microbeam Analysis Society (MAMAS)

Ryna Marinenko & John Henry Scott

National Institutes of Science and Technology

Bldg. 222, room A113

Gaithersburg, MD 20899

(301)975.3901; (301)216.1134

ryna.marinenko@nist.gov or JohnHenry.Scott@nist.gov

. .

Midwest Microscopy and Microanalysis Society (M3S) http://www.msa.microscopy.com/MSALAS/MMMS/MMMSHomePage.html
Gerry Gagne President
Abbott Laboratories
D45M, AP-31
200 Abbott Park Rd.
Abbott Park, IL 60064-3537
(847)938.5023; (847)938.5027
Gerard.D.Gagne@Abbott.com

Minnesota Microscopy Society (MMS) http://charfacnu.cie.umn.edu/MnMicSoc.html Mike Coscio (MAS Representative) C/O Medtronic Inc./Promeon Div. 6700 Shingle Creek Parkway Brooklyn Center, MN 55430 (612)514.1331; (612)514.1284 mike.coscio@medtronic.com

New England Society for Microscopy (NESM) Changmo Sung (President) Dept. of Chemical & Nuclear Eng. Center for Advanced Materials One University Avenue University of Massachusetts Lowell, MA 01854 (978)934-3540; (978)970-2435 changmo\_sung@uml.edu

New Mexico Microbeam Users Group (NMMBUG) Paul Kotula (President) Sandia National Laboratories MS-0886 Albuquerque, NM 87185-0886 (505)844-8947; (505)844-2974 pgkotul@sandia.gov

North Carolina Society for Microscopy and Microbeam Analysis (NCSMMA)
http://www.msa.microscopy.com/MSALAS/NCSMMA/
NCSMMAHomePage.html
Mike L. Franklin ( President)
Glaxo Wellcome, Inc.
Five Moore Drive
Research Triangle Park, NC 27709-3398
MF8001@Glaxowellcome.com

Oklahoma Microscopy Society (OMS) http://www.ou.edu/research/electron/oms/ Shelby Mattison (Secretary/Treasurer) University of Oklahoma Department of Botany and Microbiology 770 Van Vleet Oval Norman, OK 73071 (405)325.6234 Email: shelby@ou.edu Philadelphia Society for Microscopy http://www.msa.microscopy.com/~psmlas/ PSMHomePage.html Mrs. Patricia Stranen Connelly (President) University of Pennsylvania Biology Department Leidy Labs Philadelphia, PA 19104-6018 (215)898.7145; (215)898.8780 psconnel@sas.upenn.edu

Sensors and Surface Technology Partnership http://www.egr.uri.edu/centers/a.htm#A-1 Michael Platek (President) University of Rhode Island 4 East Alumni Avenue Kingston, RI 02895 (401)874.5828; (401)782.6422 Platek@ele.uri.edu

SouthEastern Microscopy Society (SEMS) http://www.med.unc.edu/sems/welcome.htm Robert L. Price
Director, Instrumentation
Resource Facility
USC School of Medicine
Garner's Ferry Road
Columbia, SC 29208
(803)733.3393; (803)733.1533
price@dcsmserver.med.sc.edu

Southern California Society for Microscopy and Microanalysis (SCSM&M)
http://www.scsmm.org/
Southern California Society for Microscopy & Microanalysis (SCSMM)
Mike Pickford (Secretary & Webmaster)
380 N. Via Porto Anaheim, CA 92806
(714)731.9191x320; (714)731.5938
mspford@pacbell.com

West Coast Microbeam Analysis Society (WestMAS)
C. Gordon Cleaver
Schafer Corp., Energy & Environment Div.
Schafer Vallecitos Laboratory (SVL)
6705 Vallecitos Rd.
Sunol, CA 94586
(925)862.4320; (925)862.4516
gcleaver@shafercorp.com

## SUSTAINING MEMBERS

4pi Analysis, Inc.

3500 Westgate Drive, Suite 403

Durham, NC 27707

(919)489-1757 FAX: (919)489-1487

email: sales@4pi.com

Contact: Beth Gregory/Scott Davilla

Internet: http://www.4pi.com

Mac-based EDS & Imaging, Hard- and Software

Advanced MicroBeam, Inc.

4217 C Kings-Graves Road, P. O. Box 610

Vienna, OH 44473-0610

(330)394-1255 FAX: (330)394-1834 email: dlesher@advancedmicrobeam.com

Contact: Donald Lesher

Internet: http://www.advancedmicrobeam.com Microprobe Service, Automation, Image Analysis

Cameca Instruments, Inc.

204 Spring Hill Road Trumbull, CT 06611-1356

(203)459-0623 FAX: (203)261-5506

email: camecausa@aol.com

Contact: Andrew Davis, Claude Conty

Internet: http://www.cameca.fr

EPMA, Sector & TOF SIMS, Atom Probe

Denton Vacuum, LLC.

1259 North Church Street Moorestown, NJ 08057

(856)439-9100 FAX: (856)439-9111 Contact: **George Lutz/John Crowe** email: info@dentonvacuum.com Internet: http://www.dentonvacuum.com

**Vacuum Coaters and Critical Point Dryers** 

**EDAX Inc.** 

91 McKee Drive Mahwah, NJ 07430

(210)529-4880 FAX: (201)529-3156

Email: bbergsten@edax.com Contact: **Bjorn Bergsten** Internet: http://www.edax.com

PC based microanlysis and microfocus and bulk

**EDXRF** systems

**Electron Microscopy Sciences / Diatome US** 

321 Morris Road, P. O. Box 251 Fort Washington, PA 19034

(800)523-5874 (

215)646-1566 FAX: (215)646-8931

email: sgkcck@aol.com

Contact: **Stacie Kirsch/Bang Nguyen** Internet: http://www.emsdiasum.com

**EM and LM Supplies and Diamond Knives** 

Emispec Systems, Inc.

2409 S. Rural Road

Suite D

Tempe, AZ 85282-2426

(480)-894-6643 Fax (480) 894-6458 Email: MBOUCHER@EMISPEC.COM Contact: **Diane Lynch/Hans de Ruijter** 

Internet: Diane@emispec.com

ETP-USA / Electron Detectors, Inc.

4734 Tenbury Lane Rocklin, CA 95677

(916)797-6199 FAX: (916)797-6304

Contact: **Robert J. Ruscica**Internet: http://www.etp-usa.com

Robinson BSE Det. & Infrared Chamberview Sys.

**FEI Beam Technology** 

7425 N.W. Evergreen Parkway Hillsboro, OR 97124-5830

(503)640-7645 FAX: (503)640-7509

email: dal@feico.com

Contact: Doug Rathkey/Dave Laken

LaB6 & CeB6 Tips, FIB & FIB/SEM Workstations

**FEI Company** 

7451 NW Evergreen Parkway Hillsboro, OR 97124-5830

(503)640-7500 FAX: (503)640-7509

email: phanan@feico.com

Contact: Peter Hanan/John Fahy Internet: http://www.feic.com SEM, TEM Instruments

Gatan, Inc.

5933 Coronado Lane

Pleasanton, CA 94588-3334

(925)463-0200 FAX: 925)463-0204

Contact: **Alexander Gubbens**Internet: http://www.gatan.com

TEM Accessories and Specimen Prep. Equipment

Geller MicroAnalytical Laboratory

426E Boston Street

Topsfield, MA 01983-1200 (800)MICRO-LL (978)887-7000

FAX: (978)887-6671 email: jg@gellermicro.com

Contact: **Joe Geller/Charles Herrington**Internet: http://www.gellermicro.com

EPMA, SEM/EDS, & Auger Services-EM Standards

. .

#### **IBM Analytical Services**

1580 Route 52

Hopewell Junction, NY 12533

(914)892-2627 FAX: (914)892-2003

Contact: David Kruger email: kruged@us.ibm.com

Internet: http://www.chips.ibm.com/services/asg

## JEOL USA, Inc.

11 Dearborn Road Peabody, MA 01960

(508)535-5900 FAX: (508)536-2205

email: eod@jeol.com

Contact: Robert Santorelli/Charles Nielsen

Internet: http://www.jeol.com

EPMA, Auger, SEM, TEM, NMR, Mass Spec

## RJ Lee Instruments Ltd.

515 Pleasant Valley Road Trafford, PA 15085

(412)744-0100 FAX:(412)744-0506

Contact: Fred Schamber/David Crawford Internet: http://www.personalsem.com

PERSONAL SEM for failure analysis, QA, etc.

## Lehigh University

Materials Science Department

5 East Packer Avenue Bethlehem, PA 18015

(610)758-4249 FAX:(610)758-4244 Contact: David Williams/Charles Lyman

Internet:http://www.lehigh/edu/~inmatsci/

microcourses.html

Education in SEM, AEM, AFM, & Microanalysis

## Leo Electron Microscopy, Inc.

One Zeiss Drive

Thornwood, NY 10594

(914)747-7700,(800)356-1090

FAX: (914)681-7443

Internet: http://www. leo-em.co.uk

Contact: Jim Polcyn

SEM, Optical, & Scanning Confocal Microscopes

## Materials Analytical Services, Inc.

3945 Lakefield Court Suwanee, GA 30024

(800)421-8451

(770)448-3200 FAX: (770)368-8256

email: mriglermas@aol.com Contact: Mark Rigler/Bill Longo Internet: http://www.mastest.com

FTIR,EDXRF,S(TEM),SEM,FIB,STM&XRD Serv.

#### Micron, Inc.

3815 Lancaster Pike

Wilmington, DE 19805-1599

(302)998-1184 FAX: (302)998-1836 Contact: James Ficca/Willard Gresham Internet: http://www.micronanalytical.com

Analytical Services OM, SEM/EDS, TEM, & EPMA

## Microscopy Today

PO Box 122

Middleton, WI 53562

(608)836-1970 FAX: (608)836-1969 email: MicroToday@mindsrping.com

Contact: **Don Grimes** 

Publisher of Microscopy Today

## Nissei Sangvo America, Ltd. **Hitachi Scientific Instruments**

775 Ravendale Drive

Mountain View, CA 94043

(650)969-1100 FAX: (650)961-0368 Contact: Steve Joens/Donna Armanino

Internet: http://www.nissei.com

SEM, TEM, & Field-Emission SEM, TEM, STEM,

and FIB

## NORAN Instruments, Inc.

2551 W. Beltline Highway Middleton, WI 53562

(608)831-6511 FAX: (608)836-7224

email: dmasaki@noran.com

Contact: Jerry Shattuck/Dennis Masaki

Internet: http://www.noran.com

Microanalysis Systems & Confocal Microscopes

## Oxford Instruments, Inc.

## Microanalysis Group

130 A Baker Avenue Ext. Concord, MA 01742-2204

(978)369-9933 FAX: (978)369-8287

email: carr@ma.oxinst.com Contact: Joe Carr/Neil Rowlands

Internet: http://www.oxford-instruments.com Link EDS Systems, Microspec WDS, EM Cryo

Access., CL & BSD

## Physical Electronics Inc.

6509 Flying Cloud Drive Eden Prairie, MN 55344

(800)328-7515

(612)828-6100 FAX: (612)828-6322

email: abelu@phi.com Contact: Anna Belu

Internet: http://www.phi.com

Surface Analysis Inst., Auger, XPS, & SIMS

## **Princeton Gamma-Tech**

CN863

Princeton, NJ 08542-0863

(609)924-7310 FAX: (609)924-1729

email: skin@pgt.com

Contact: Doug Skinner/Ted Juzwak

Internet: http://www.pgt.com

EDS & Image Analysis for EM and OM

#### RONTEC USA, Inc.

20 Main Street

Acton, MA 01720

(978) 266-2900 Fax (978) 929-9313

email: psmith@rontecusa.com Contact: Paul Smith/John Gannon Internet: http://www.rontecusa.com

## SEM / TEC Laboratories, Inc.

5025 S. 33rd Street

Phoenix, AZ 85040

(602)276-6138 FAX: (602)232-2225

email: edsworth@aol.com Contact: Ed Holdsworth

Internet: http://www.semtec.com

## SPI Supplies / Structure Probe, Inc.

569 E. Gay Street, P. O. Box 656 West Chester, PA 19381-0656

(800)242-4774

(610)436-5400 FAX: (610)436-5755

email: cgarber@2spi.com

Contact: Charles Garber/Andrew Blackwood

Internet: http://www.2spi.cc

EM Prep. Equipment and Supplies / Service Lab

## ThermoMicroscopes

1171 Borregas Avenue

Sunnyvale, CA 94089

(408)747-1600 FAX: (408)747-1601 email: jezzleckenby@thermomicro.com Contact: Jezz Leckenby/Ray Eby Internet: http://www.thermomicro.com

A Complete Line of Scanning Probe Microscopes